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## **Gender Differences in Drinking Patterns and Problems Among College Students: A Review of the Literature\***

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Alcoholic beverages have been used for a very long period of time, probably since the paleolithic age and certainly since the neolithic (Knupfer, 1960). Historians have reported that the records of all ancient civilizations refer to the use of alcoholic beverages. The earliest of these accounts are found on Egyptian carvings, Hebrew script, and Babylonian tablets (Patrick, 1952). The Code of Hammurabi (cir. 2,225 B.C.) devoted several sections to problems created by the abuse of alcohol and in China laws that forbade making wine were enacted and repealed 41 times between 1,100 B.C. and 1,400 A.O. (Alcoholism and Drug Research Foundation of Ontario, 1961). Thus, it is obvious that problems related to the consumption of alcohol are not unique to present societies.

The role of alcohol in American society has been ambivalent since the colonial period (Straus and Bacon, 1953). Until recently, the attitude that "ladies don't drink" has largely kept female drinking and alcohol abuse from public discussion. This attitude, however, has only been prevalent in North America for the last 100 years or so while alcohol and women have been entwined throughout history. In some ancient cultures women had an active part in the drinking ceremonies and folklore, including presiding at the Greco-Roman cults of Dionysius and Bacchus and brewing beer in ancient Babylon as temple priestesses. The Egyptians considered the knowledge of how to brew beer as a gift imparted to them by their goddess of nature, Isis (Hornik, 1977).

Alcohol was frequently used in childbirth throughout the ages and beer was thought to fortify a woman for breast feeding. Hot toddies of various fruit tonics have been used for centuries for menstrual cramps and for pre-menstrual tension. In the latter part of the 19th Century many women drank tonics with high alcohol contents to ease the frustrations of child rearing or for

depression. Women who were alcoholics during this period were often labeled hysterical. They were not called alcoholics because it conflicted with their role as good mother, wife or well-mannered spinster (Hornik, 1977).

However, alcohol consumption among women has begun to attract increased attention. This appears to have resulted from the rise of feminism, increased drinking by women, and health concerns such as "hidden alcoholism" and cirrhosis of the liver (Chalfant and Roper, 1980). Because "the youth are the future," considerable attention has been directed toward drinking among college women. This paper reports gender variations in drinking patterns and problems among college students.

### **Incidence of Drinking**

Studies have reported a higher percentage of drinkers among male than among female collegians. This relationship was found by Straus and Bacon (1953) in their classic study of 17,000 college students and later by Rogers (1970) at a midwestern university, by Glassco (1975) at a southern state university, by E:igs (1977) in a national survey of colleges, by Hockhauser (1977) at a southern state college, and by Kaplan (1979) at a southwestern state university. In their analysis of the literature for the period 1960-1975, Blane and Hewitt (1977) examined 22 surveys which presented gender-specific data for collegians and found that virtually all revealed more males than females to be drinkers.

More recently the same relationship has been reported by Biber, Hashway and Annick (1980) at a college in Boston, by Kozicki (1982) at a midwestern university, by Trotter (1982) at a southwestern state college, by Iutovich and Iutovich (1982) at four colleges in northwestern Pennsylvania, by Barnes and Welte (1983) at 22 colleges in New York state, by Beck (1983) at a public college in Maryland, by Peterson and Allen (1983) at a university in Illinois, McCarthy (1983) at a university in Illinois, by Mills and McCarthy and by Waring, Petraglia and Busby (1984) at private colleges in New York City, and by Hughes and Dodder (1984) at a university in Oklahoma.

These findings are not unique to the United States. Reporting a higher incidence of drinking among males is Parfrey (1977) at a university in Ireland, Singh and Singh (1979) at a medical college in India, Marin (1976) at a Columbian university, Lamontagne, Tetreault and Boyer (1979) at a Canadian university, Orford, Waller and Peto (1974) at a university in England, Engs (1982) at an Australian university, Parameswaran and Rao (1983) at 30 colleges in India, Anderson (1984) at a university in England, and Lapp (1984) at a university in Canada. Relatedly, Oshodin (1982) and Achalu and Duncan (1984) reported the same relationship among Nigerian students attending colleges in the United States.

However, not all studies have found such differences. More recently, Hanson's (1977) survey of colleges throughout the United States, Banks and Smith's (1980) study at a private college in western New York, Reiskin and Wechsler's (1981) survey of students using a campus mental

health center at a large private university, Kodman and Stumak's (1984) study of fraternities at 41 colleges in 29 states, Keane and Swinford's (1984) sample of undergraduate (88%) and graduate students (22%) at a large midwestern university, and Berkowitz and Perkins' (1985) study at a small private college in New York failed to find significant differences. Reporting a higher percentage of female students to be drinkers was Pollock (1969) in her study of a state college on the west coast, Kuder and Madson (1976) in their study at a state university in the west, Strange and Schmidt (1979) in their study at a state university in the southwest, Rapaport, Cooper and Leemaster (1984) in their survey at a midwestern university, and Friend and Koushki (1984) in their examination of four colleges in far upstate New York.

### **Frequency and Consumption of Drinking**

More frequent and higher consumption of alcohol by males has been reported over a period of decades. Recent confirmation includes that by Orford *et al.* (1974), Smart and Schmidt (1975), Rachel *et al.* (1975), Kuder and Madson (1976). Engs (1977). Hockhauser (1977). Wilsnack and Wilsnack (1978), Hill and Bugen (1979). Roizen. Clark and Milkes (1979), Johnson and Sedlacek (1979), Kaplan (1979). Scheller-Gilkey. Gomberg and Clay (1979), Strange and Schmidt (1979). Wechsler and McFadden (1979), Biber *et al.* (1980), Perkins, Jenkins and McCulloch (1980), Wechsler and Rohman (1981), Iutovich and Iutovich (1982). Trotter (1982). Engs (1982), Wakefield (1982), Beck (1983), Barnes and Welte (1983). Peterson and Allen (1983), Anderson (1984), Geller (1984), Keane and Swinford (1984). Rapaport *et al.* (1984), Engs and Hanson (1984), and Berkowitz and Perkins (1984). The only exception has been Reiskin and Wechsler's (1981) survey of students who utilized the services of a campus mental health center. However, data from students at the same university who did not use the center are consistent with the other studies.

### **The Gender Differential**

Several reasons have been suggested for the differential in drinking patterns between men and women (Myerson, 1940; Gusfield, 1962; Lisansky, 1958). Windham and Aldridge (1965) as well as Siegel (1952) referred to the traditional belief that the use and abuse of alcohol was a male prerogative. Clark (1967) suggested that drinking differences are based largely on the expectation that female sex roles are characterized by what he termed "conventionality." By this he referred to the "acceptance of the dominant 'official' standards of morality and propriety" (p. 2). Preston (1964) similarly asserted that drinking is often a symbol that differentiates the sexes. Windham and Aldridge (1965) additionally pointed out that women traditionally tended to be economically dependent on and subordinate to men. In this regard Knupfer *et al.* (1963) emphasized that "other members of the population who do not earn their living by paid work also have more restricted drinking privileges than adult free males—for example, children, prisoners, mental patients, and persons on relief" (p. 14).

The sex role thesis finds recent support in Biber *et al.*'s (1980) study of urban college students. Trotter's (1982) comparison of Anglo and Mexican-American female college students. and Kleinke and Hinrich's (1983) study of feminine, androgynous. and masculine women.

Wilsnack and Wilsnack (1978) point out that increased drinking among females might be a result of the womens' movement and changes in womens' roles, especially changes that involve exposure to formerly masculine environments and roles. They suggest that changes in sex roles might increase womens' exposure to alcohol and opportunities to drink; might modify traditional norms against female drinking, thereby making drinking more permissible; and might offer females new goals and aspirations, thus causing stress that alcohol might be used to reduce.

It would appear that the "double standard" in alcohol may be decreasing. Wechsler and McFadden (1976) referred to sex differences in adolescent alcohol use as "a disappearing phenomenon." While Blane and Hewitt's (1977) analysis of the literature led them to conclude that it was uncertain whether sex differences in incidence had changed much between 1965 and 1975. Other research supports the "disappearing phenomenon" thesis (Girdano and Girdano, 1976; Engs, 1977; Hanson, 1974, 1977; Banks and Smith, 1980; Reiskin and Wechsler, 1981). For example, Straus and Bacon's 1953 college study found a 16 percentage point differential between the sexes while Hanson's comparable 1972 study at 37 colleges and universities found this reduced to only five percentage points (Hanson, 1974). Shortly thereafter, Glassco (1974) found only three percentage points between males and females in his study of college seniors. Later, Hanson (1977) found an equal percentage of males and females to be drinkers at 17 of his earlier- sampled institutions. While some studies (Engs, 1977; Engs and Hanson, 1986) have reported a difference, the apparent reduction of the differential between males and females in the incidence of drinking is consistent with the reduction of the double standard in sexual behavior, smoking, voting, and other behaviors.

However, Berkowitz and Perkins (1985) conducted a five year longitudinal study of drinking at a small college in New York for the period 1979-1984. They found that while there was a significant narrowing of the gender gap in frequency and volume of alcohol consumption, males continued to experience more problems due to drinking and also differed in alcohol attitudes as well as their motivations for drinking.

### **Beverage Preferences**

Straus and Bacon (1953) found that the beverage most often consumed by males who drank was beer (72%) followed by spirits (21%) and wine (7%). For females, the favored beverages were spirits (43%), beer (41%) and wine (6%). About 25 years later, Engs (1977) found beer to remain the most popular among men and spirits to remain the most popular among women. Of the men, 81% drank beer at least once a year, 75% drank spirits, and 65% drank wine. Of the women, 74% drank spirits at least once a year, 65% drank wine, and 61% drank beer.

In their sample of New England college students, Wechsler and McFadden (1979) and Wechsler and Rohman (1981) found most males to drink beer (95%). followed by spirits (92%) and wine (86%). Among females, the highest proportion drank spirits (95%). followed by wine (91%) and beer (77%). While beer was preferred by both males and females at a large midwestern university (Strange and Schmidt. 1979). wine and liquor were drunk much more often by females than by males. In a small private college in western New York. Banks and Smith (1980) found that males were more likely to prefer beer while female choices were more evenly distributed among beer, wine and spirits, and in a private college in Boston. Biber *et al.* (1980) found males to prefer usually drinking beer and females to prefer usually drinking liquor, followed by wine.

In a sample of students at colleges across the United States, Engs and Hanson (1985) found beer to be preferred by males, wine to be preferred by females, and distilled spirits to be equally preferred by males and females. Similarly, Reiskin and Wechsler (1981) found that men, in two samples of students at an urban university. reported significantly more frequent consumption of beer than did women. However. there were no significant differences between the sexes. in either sample. in the consumption frequency of either wine or spirits.

Males at the University of Maryland reported higher frequency of both beer and whiskey consumption than did females, while women reported drinking dinner wine more often than men (Johnson and Sedlacek, 1979). Likewise, among students at Indiana University. males preferred beer while females preferred wine (Wakefield, 1982).

At a state university in the southeast, Trotter (1982) found that the alcoholic beverage most often drunk by males was beer (75%) followed by liquor (21%) and wine (4%) while that most often drunk by females was liquor (64%), followed by wine (20%) and beer (16%). Among students at a large midwestern university, men were more likely to drink beer and straight liquor while women were more likely to drink wine and mixed drinks (Keane and Swinford, 1984).

Beverage preferences in England and Australia appear to be consistent with those generally found in the United States. For example, among Australian human service students. (Engs. 1982) found males to prefer beer and females to prefer wine. and in his study of English undergraduates, Anderson (1984) also found men to prefer beer and women to prefer wine.

## **Drinking Locations**

At a university in Maryland, males reported drinking most frequently at what the researchers (Johnson and Sedlacek, 1979) called public places (e.g., car, hallgame. concert) while females drank most often in restaurants or lounges. Among both males and females at 34 colleges in New England (Wechsler and Rohman. 1981). the most frequent drinking location was "nightclub, bar, tavern, etc." followed by "dormitory, own apartment, or home." Among students at a university in Texas. Men were more likely to drink in their own home, a friend's home or a dormitory. while women were more likely to drink in a restaurant, nightclub or bar (Trotter, 1982).

Drinking is greatly influenced by the social context in which it occurs (Roizen, 1972). In this regard, Waller and Lorch (1977) reported that male alcohol consumption tends to occur in drinking groups of the same sex while female drinking most often occurs in mixed groups.

Biber and her colleagues (1980) found that among students at a large private college in Boston, both males and females preferred to drink in large group settings. However, compared to males, females preferred drinking in structured social situations (nightclubs, bars, taverns, restaurants, or at home with parents) to drinking in social environments (dormitories, athletic events, concerts, campus grounds or in parks) or in intimate surroundings (with one person or alone).

Biber *et al.* (1980) observed that drinking is integrated into a wider range of activities for men than for women. Men are much more likely to drink outdoors, at athletic events, alone, in small groups of other men, or in small groups of men and women. Such contexts are typically associated with heavy drinking. But women in mixed group situations tend to conform to sex-role stereotypes regarding appropriate drinking behavior. Thus drinking in such situations tends to limit the consumption of alcohol by women.

## **Drinking Problems**

Male students tend to have a higher percentage of drinking problems than females. In response to the query "Does drinking interfere with school? (i.e., missing class)," 15.1% of the male drinkers at a western university agreed that it sometimes did, while 7.9% of the female drinkers responded in the same way (Kuder and Madson, 1976). When asked "Do you stop drinking before you get drunk?," 29% of the female drinkers reported that they always did, while only 19.4% of the males responded in the same way.

In comparison to females, males at a Maryland university reported having been drunk more often and having driven a car more often after having had at least three drinks (Johnson and Sedlacek, 1979). However, Cox and Baker (1982) found that males and females had comparable distributions of problem drinking scores on the Michigan Alcoholism Screening Test.

At a midwestern university, males reported significantly more alcohol-related problems with family, relatives, friends, neighbors, school or employer, the law, finances, and health or injury (Kozicki, 1982). In their study at a public university in Illinois, Peterson and Allen (1983) found that males reported significantly more drinking-related mishaps (accidents, damage to property, etc.) than did females. Males also reported more problem-related reasons for drinking.

Reiskin and Wechsler (1981) found that in a sample of students at an urban university in New England, 71% of the men and 54% of the women reported being intoxicated at least once in the previous year. Being intoxicated was defined as "when alcohol causes you to lose control of physical activities, or to get unsteady, aggressive, or sick to your stomach" (p. 720). Males also indicated a substantially higher rate of problems arising from their drinking, a finding also reported by Walfish and his colleagues (1981) at a large university in Florida.

A study at a Michigan university (Rapaport *et al.*, 1984) revealed that more males reported damaging property, preparing less for exams, attending class less frequently, and experiencing black-outs. More males also reported drinking with the specific intent of becoming drunk, drinking while driving, driving while drunk, drinking before class, and drinking alone.

At a small private college in upstate New York (Berkowitz and Perkins, 1985), three general categories of problems due to drinking were examined: (1) physical injuries to self or others, property damage, or fighting, (2) damaged social relations (e.g., behavior which resulted in negative reactions from others, or damaged friendships or relationships), and (3) impaired academic performance (e.g., inefficiency in homework, classroom or lab performance; late papers, missed classes or exams; or failure to study for exams). Significantly more males reported the first two categories, and while more also reported impaired academic performance, the difference was not statistically significant.

A recent study of students at colleges across the United States conducted by the present authors (see Table I) indicates that significantly more men reported ever having experiencing 17 of 18 drinking-related problems, including heavy drinking, than did women.

**TABLE I**  
**Problems Due to Drinking Ever Experienced Among Drinkers,**  
**by Sex, in Percent**

Problem	Men (N=1,319)	Women (N=2,104)
Hangover	90.4	84.5
Vomited	85.6	77.6
Drove car after drinking	84.2	67.8
Drove car after knowing had too much to drink	70.8	54.2
Drove car while drinking	71.4	48.5
Came to class after drinking	29.8	16.8
Cut class because of drinking	26.3	16.4
Missed class because of drinking	44.6	35.9
Stopped for DWI	4.8	1.6
Criticized for drinking too much	28.5	18.1
Had trouble with the law	19.5	5.9
Lost job	.6	.5*
Received lower grade	16.8	9.4
Problems with school administration	7.6	3.6
Gotten into fight	37.4	17.3
Thought have drinking problem	23.4	13.7
Damaged property	40.4	10.7
Heavy Drinking*	37.8	17.4

\*Difference not statistically significant. All other differences significant at .001 level of confidence.

\*Heavy drinking defined as consuming six or more drinks at one sitting at least once a week.

## Conclusion



A higher percentage of college men are likely to drink, to drink more often, to consume more, and to experience more drinking problems than women. While the differentials in drinking patterns and problems might be narrowing, they clearly remain significant and potent. To be most effective, collegiate alcohol policies and programs must reflect these continuing differentials (Hanson and Engs, in press).

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